

AMENDMENTS TO THE CLAIMS:

Please add claims 15-39 as follows:

15. A method for padding a boundary macroblock having MxN defined and undefined texture pixels, M representing a number of rows and N representing a number of columns of the defined and/or undefined texture pixels, said boundary macroblock including two field blocks, the method comprising:

if the field block has the defined and undefined texture pixels, padding the undefined texture pixel of said field block based on the defined texture pixel of said field block, said padding of the undefined texture pixel of said field block including:

padding one or more of the undefined texture pixels of said field block on a row-by-row basis to provide a padded row, and

if said field block has a transparent row having only the undefined texture pixels, padding the transparent row based on one or more of the padded rows;

and

if the field block has only the undefined texture pixels, padding said field block with a constant value.

16. The method of claim 15, wherein said padding of the field block with a constant value includes padding said field block with a constant value of 2^{L-1} , wherein L is a number of bits corresponding to the defined texture pixel in the boundary macroblock.

17. The method of claim 15, wherein said padding of the field block with a constant value includes padding said field block with a constant value of 128.

18. The method of claim 15, wherein said padding of one or more of the undefined texture pixels of the field block on a row-by-row basis includes padding the undefined texture pixel in a row based on one or more of the defined texture pixels adjacent said undefined texture pixel in said row.

19. The method of claim 15, wherein said padding of the transparent row based on one or more of the padded rows includes padding the transparent row based on one or more of the padded rows adjacent said transparent row.

20. A method for padding texture macroblocks, the texture macroblock including a boundary macroblock having MxN defined and undefined texture pixels and an undefined macroblock having only the undefined texture pixels, M representing a number of rows and N representing a number of columns of the defined and/or undefined texture pixels, said boundary macroblock including two field blocks, the method comprising:

if the field block of the boundary macroblock has the defined and undefined texture pixels, padding the undefined texture pixel of said field block based on the defined texture pixel of said field block to provide a padded boundary macroblock, said padding of the undefined texture pixel of said field block including:

padding one or more of the undefined texture pixels of said field block on a row-by-row basis to provide a padded row, and
if said field block has a transparent row having only the undefined texture pixels, padding the transparent row based on one or more of the padded rows;
if the field block of the boundary macroblock has only the undefined texture pixels, padding said field block with a constant value to provide a padded boundary macroblock; and
padding the undefined macroblock based on the padded boundary macroblock.

21. The method of claim 20, wherein said padding of the field block with a constant value includes padding said field block with a constant value of 2^{L-1} , wherein L is a number of bits corresponding to the defined texture pixel in the boundary macroblock.

22. The method of claim 20, wherein said padding of the field block with a constant value includes padding said field block with a constant value of 128.

23. The method of claim 20, wherein said padding of one or more of the undefined texture pixels of the field block on a row-by-row basis includes padding the undefined texture pixel in a row based on one or more of the defined texture pixels adjacent said undefined texture pixel in said row.

24. The method of claim 20, wherein said padding of the transparent row based on one or more of the padded rows includes padding the transparent row based on one or more of the padded rows adjacent said transparent row.

25. A method for padding a boundary macroblock having MxN defined and undefined texture pixels, M representing a number of rows and N representing a number of columns of the defined and/or undefined texture pixels, said boundary macroblock including two field blocks, the method comprising:

if the field block has at least one defined texture pixel and said field block has a row including the defined and undefined texture pixels, padding the undefined texture pixel in said row based on one or more of the defined texture pixels in said row;

if the field block has at least one defined texture pixel and said field block has a row including only the undefined texture pixels, padding the undefined texture pixel in said row based on one or more of the defined texture pixels in another one or more rows in said field block; and

if the field block has only the undefined texture pixels, padding said field block with a constant value.

26. The method of claim 25, wherein said padding of the field block with a constant value includes padding said field block with a constant value of 2^{L-1} , wherein L is a number of bits corresponding to the defined texture pixel in the boundary macroblock.

27. The method of claim 25, wherein said padding of the field block with a constant value includes padding said field block with a constant value of 128.

28. The method of claim 25, wherein said padding of the undefined texture pixel in said row based on one or more of the defined texture pixels in said row includes padding the undefined texture pixel in said row based on one or more of the defined texture pixels adjacent said undefined texture pixel in said row.

29. The method of claim 25, wherein said padding of the undefined texture pixel in said row based on one or more of the defined texture pixels in another one or more rows in the field block includes padding the undefined texture pixel in said row by using one or more of the defined texture pixels in another one or more rows adjacent said row.

30. An apparatus for padding a boundary macroblock having $M \times N$ defined and undefined texture pixels, M representing a number of rows and N representing a number of columns of the defined and/or undefined texture pixels, said boundary macroblock including two field blocks, the apparatus comprising:

a defined field block padding circuit for padding the undefined texture pixel of the field block having the defined and undefined texture pixels based on the defined texture pixel of said field block, the defined field padding circuit including:

a horizontal padding circuit for padding one or more of the undefined texture pixels of the field block on a row-by-row basis to provide a padded row, and
a transparent row padding circuit for padding a transparent row having only the undefined texture pixels of the field block based on one or more of the padded rows; and
an undefined field block padding circuit for padding the field block having only the undefined texture pixels with a constant value.

31. The apparatus of claim 30, wherein the constant value is 2^{L-1} , wherein L is a number of bits corresponding to the defined texture pixel in the boundary macroblock.

32. The apparatus of claim 30, wherein the constant value is 128.

33. An apparatus for padding texture macroblocks, the texture macroblock including a boundary macroblock having MxN defined and undefined texture pixels and an undefined macroblock having only the undefined texture pixels, M representing a number of rows and N representing a number of columns of the defined and/or undefined texture pixels, said boundary macroblock including two field blocks, said apparatus comprising:

a defined field block padding circuit for padding the undefined texture pixel of the field block having the defined and undefined texture pixels of the boundary macroblock

based on the defined texture pixel of said field block to provide a padded boundary macroblock, the defined field block padding circuit including:

a horizontal padding circuit for padding one or more of the undefined texture pixels of the field block on a row-by-row basis to provide a padded row, and

a transparent row padding circuit for padding a transparent row having only the undefined texture pixels of the field block based on one or more of the padded rows;

an undefined field block padding circuit for padding the field block having only the undefined texture pixels of the boundary macroblock with a constant value to provide a padded boundary macroblock; and

an undefined macroblock padding circuit for padding the undefined macroblock based on the padded boundary macroblock.

34. The apparatus of claim 33, wherein the undefined macroblock is adjacent the boundary macroblock.

35. The apparatus of claim 33, wherein the constant value is 2^{L-1} , wherein L is a number of bits corresponding to the defined texture pixel in the boundary macroblock.

36. The apparatus of claim 33, wherein the constant value is 128.

37. An apparatus for padding a boundary macroblock having MxN defined and undefined texture pixels, M representing a number of rows and N representing a number of columns of the defined and/or undefined texture pixels, said boundary macroblock including two field blocks, the apparatus comprising:

a first padding device for padding the undefined texture pixel in a row of the field block having at least one defined texture based on one or more of the defined texture pixels in said row;

a second padding device for padding the undefined texture pixel in a row of the field block having at least one defined texture based on one or more of the defined texture pixels in another one or more rows in said field block; and

a third padding device for padding the field block having only the undefined texture pixels with a constant value.

38. The apparatus of claim 37, wherein the constant value is 2^{L-1} , wherein L is a number of bits corresponding to the defined texture pixel in the boundary macroblock.

39. The apparatus of claim 37, wherein the constant value is 128.